



WASTE TIRE REPORT

Waste Tire Program CY 2012
A Report to the General Assembly

2012 Waste Tire Report

● Introduction

- Introduction
- Background
- Waste Tire Working Group

● Fee Effectiveness

- Successes
 - Amnesties
 - County Grants
 - Orphan Tire Piles
 - Health Benefits



2012 Waste Tire Report

◎ Fee Effectiveness (Con'td)

- Challenges
 - Fiscal
 - Disposal
 - Tire Derived Fuel
- Receipts
- Expenditures
- Cost Issues



Tire Derived Fuel

2012 Waste Tire Report

◉ Developing Markets

- Generation
- Markets
- TDF
- Ground Rubber
 - Auto
 - Asphalt



2012 Waste Tire Report

- Extend Fee Past 2014?
- County Tire Disposal
- Other Issues





Introduction and Background

Introduction and Background

Introduction



KRS 224.50-872



- ⦿ Report to the General Assembly
 - No later than January 15 each year
 - Effectiveness
 - Developing markets
 - Revenue generated
 - Extension of the fee
 - Generation
 - Disposal
 - Orphan piles
 - Cost of disposal by counties

Introduction and Background

Background



Background

- ◎ 1990: HB 32
 - \$1 per tire fee
 - Exemption for “Recycling”
 - 100,000s tires in piles awaiting markets
- ◎ 1998: Revised
 - No “exemption”
 - Bonding
 - Report to legislature



Background

- ◎ 2002, 2006
 - Four year extension for \$1 per tire fee
- ◎ 2010, 2012
 - Two year extension as part of budget bill
- ◎ Sunsets July 1, 2014





Introduction and Background

Waste Tire Working Group

Waste Tire Working Group (WTWG)

- Established 2011 by HB 433
- Provide advice to the cabinet
- KRS 224.50-855
- Amended in 2012 by HB 518 to add:
 - County Judge-Executive
 - Mayor
 - Retail sales representative



Waste Tire Working Group (WTWG)



● Members

- Director, Division of Waste Management
- Manager, Recycling and Local Assistance Branch
- Department of Agriculture representative
- Two Solid Waste Coordinators of Kentucky (SWaCK) representatives
- Mayor
- County Judge-Executive
- Retail sales representative

Waste Tire Working Group (WTWG)

- 2012

- Revised fact sheets

- See

[http://waste.ky.gov/RLA/Waste%20Tires/
Pages/WasteTireWorkGroup.aspx](http://waste.ky.gov/RLA/Waste%20Tires/Pages/WasteTireWorkGroup.aspx)



- 2013

- Familiarize new members with program
- Evaluation of program



The Effectiveness of the Waste Tire Fee in Funding
Implementation of the Program in 2012

Fee Effectiveness

Fee Effectiveness

Successes



Amnesties

- Removed 19.0 M Passenger Tire Equivalents (PTEs) since 1998
- Costs \$18.9 M
- If the *USS Nimitz* aircraft carrier was used to transport these tires it would take 33 loads.

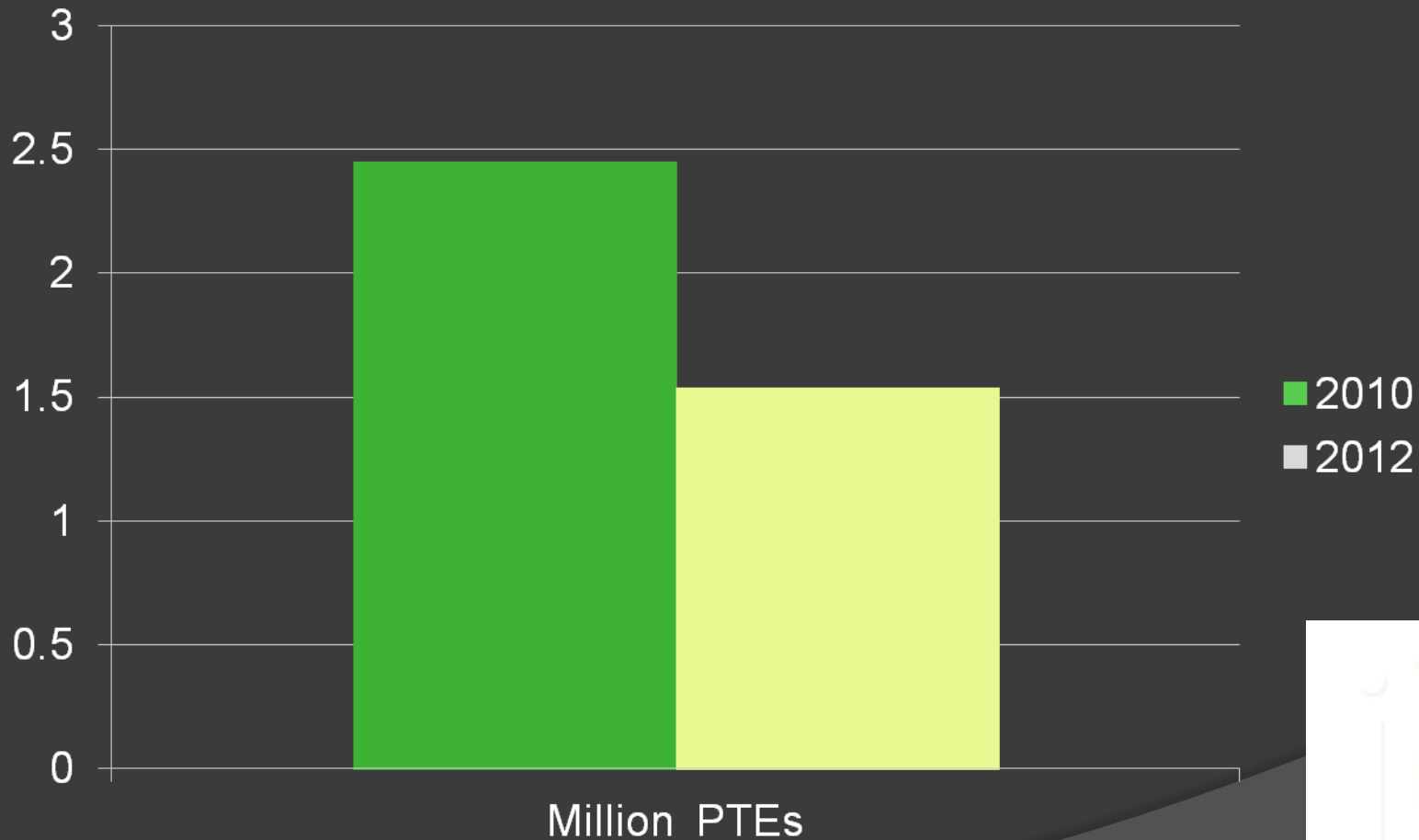


Amnesties

- Reduced Number of Tires:
 - FY 2012 ADDs:
 - Purchase
 - Cumberland Valley
 - KIPDA
 - Barren River
 - Green River
 - Pennyrite
 - Fall 2012, FY 2013 ADD:
 - Bluegrass



Amnesties: Reduced Number of Tires



Small Grants to Counties



● \$3,000 Grants for Piles

- Disbursed \$336,000
- 112 Counties spent \$259,484 along with state monies for this program
- Recycled 252,883 PTEs
- Counties returned unspent portion
- Counties reported spending \$74,357 of their own money

Orphan Tire Piles

West Point, Hardin Co., pile awaits clean-up. *EEC photo*



FY 2012 Pile Remediation:			
County: Site			
Bracken: Mini Farms	15,575	\$14,625	\$0.94
Anderson: Walker	23,862	\$22,406	\$0.94
LaRue: C. T. Walker	14,008	\$13,154	\$0.94
Meade: Ball Farm	3,486	\$3,273	\$0.94
Subtotal 2012 Remediation	56,931	\$53,458	\$0.94



Orphan Tire Piles



1990s Simpson County Crumb Rubber

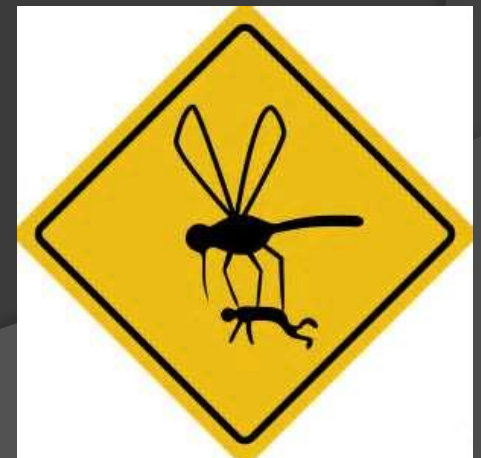
- Used KY Pride Fund
 - 804,728 PTEs.
 - \$814,483



Health Benefits

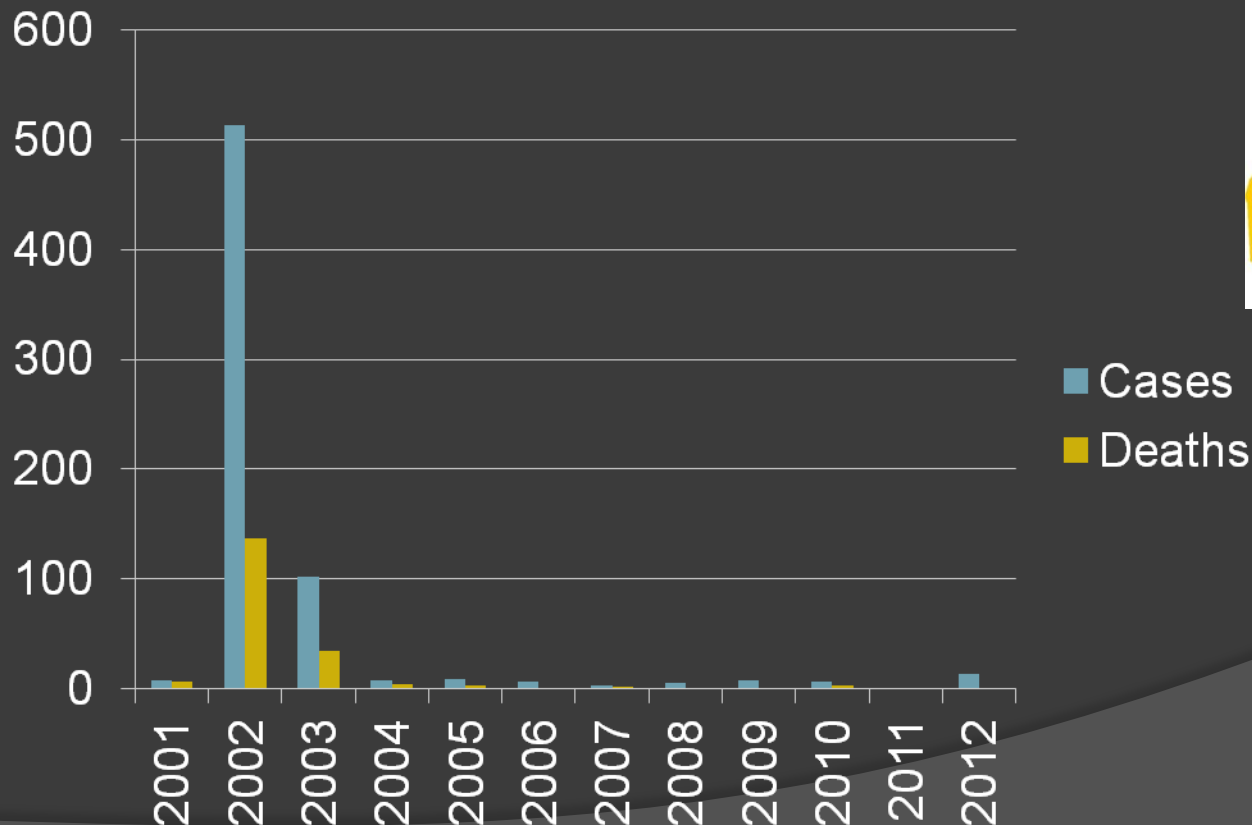
- West Nile virus remains low, per CHFS

Report on West Nile Virus	
Year	Cases
2008	3
2009	2
2010	3
2011	4



Health Benefits

- Equine West Nile virus remains low, per KY Department of Agriculture



Fee Effectiveness

Challenges





● Fiscal Issues:

- Retailers:

- May collect disposal fees, and then wait until next amnesty
- Some give tires to unpermitted hauler

- Amnesties:

- Handle 20-30% waste tires, 80-70% private
- If private markets decrease, amnesties cannot handle increase

◎ Fiscal Issues:

- Retailers:

- May charge up to \$3.00-3.50 to discourage customers from surrendering tire. Later may be found in tire dump or legally at amnesty.



◎ Fiscal Issues:

- Dept. of Revenue:
 - Receives \$50,000 per year flat fee
 - Not enough to collect tire fee (<1 person)
 - No incentive, like a %, to recover tire fee
 - Recovers 76% of available fee



● Tire Disposal:

- Auto Salvage Yards:
 - Place tires in body before crushing
 - Some may take to amnesties or dump
- Landfilling
 - Less expensive to shred once and landfill than recycle: Approximately \$0.50 landfill vs. \$1.00 recycle at the gate of the processor (\$1.00-1.50 vs. \$1.50-2.00 at retailer).
 - 14 states have banned all tires and tire shreds from landfills



- Tire Derived Fuel (TDF):
 - Loss of market (TDF users):
 - Processors pile up tires
 - Exceed bond
 - Decreasing fire lanes
 - NOVs issued



● Tire Derived Fuel (Con'td):

- King Tire Recycling Fire:
 - \$100,000 Bond
 - Cabinet removed 1,086,721 PTEs
 - 558,381 used by landfill owner in construction
 - 528,340 disposed due to contamination
 - Cost Waste Tire Trust Fund \$649,050
 - Cost Hazardous Waste Management Fund \$298,402
 - Personnel cost General Fund \$14,733
 - Total taxpayer cost \$862,185 or \$0.79 per PTE





“Employees of King Tire Recycling work to move equipment away from a blaze which broke out in the processing facility” according to Janie Slaven of *the McCreary County Record* who took this picture that appeared in the August 23, 2012 edition.





The cabinet contractor PECCO, Inc. places cover soil on the waste tires (EEC photo).

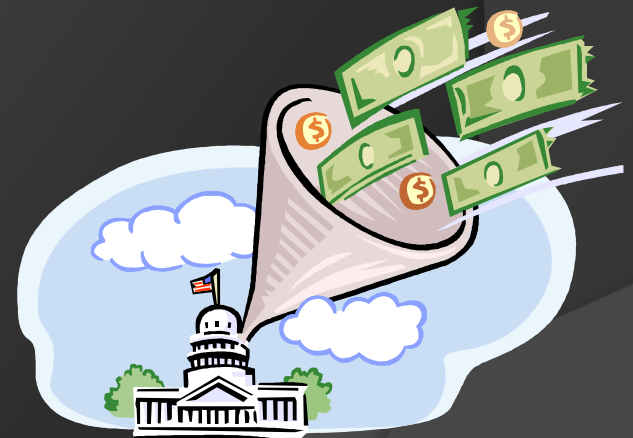


Before and after clean-up at King Tire (EEC photo).



Fee Effectiveness

Receipts



Fee Receipts

Tire Fee Receipts	
FY	\$
2006	2,698,852
2007	2,690,103
2008	2,734,918
2009	2,590,443
2010	2,621,464
2011	2,621,464
2012	2,591,606



Revenue recovers 76% of available fee

Fee Effectiveness

Expenditures

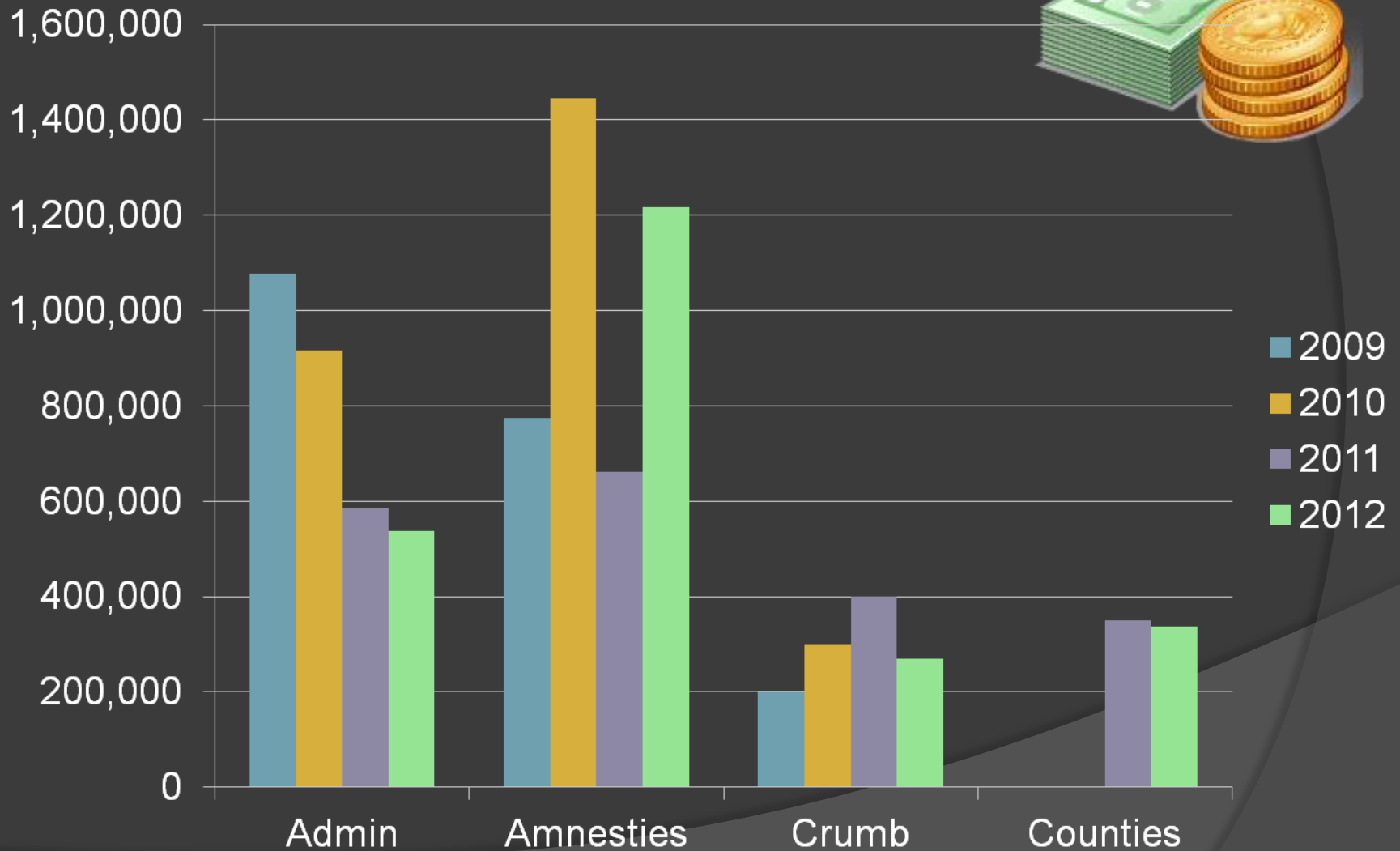


Expenditures



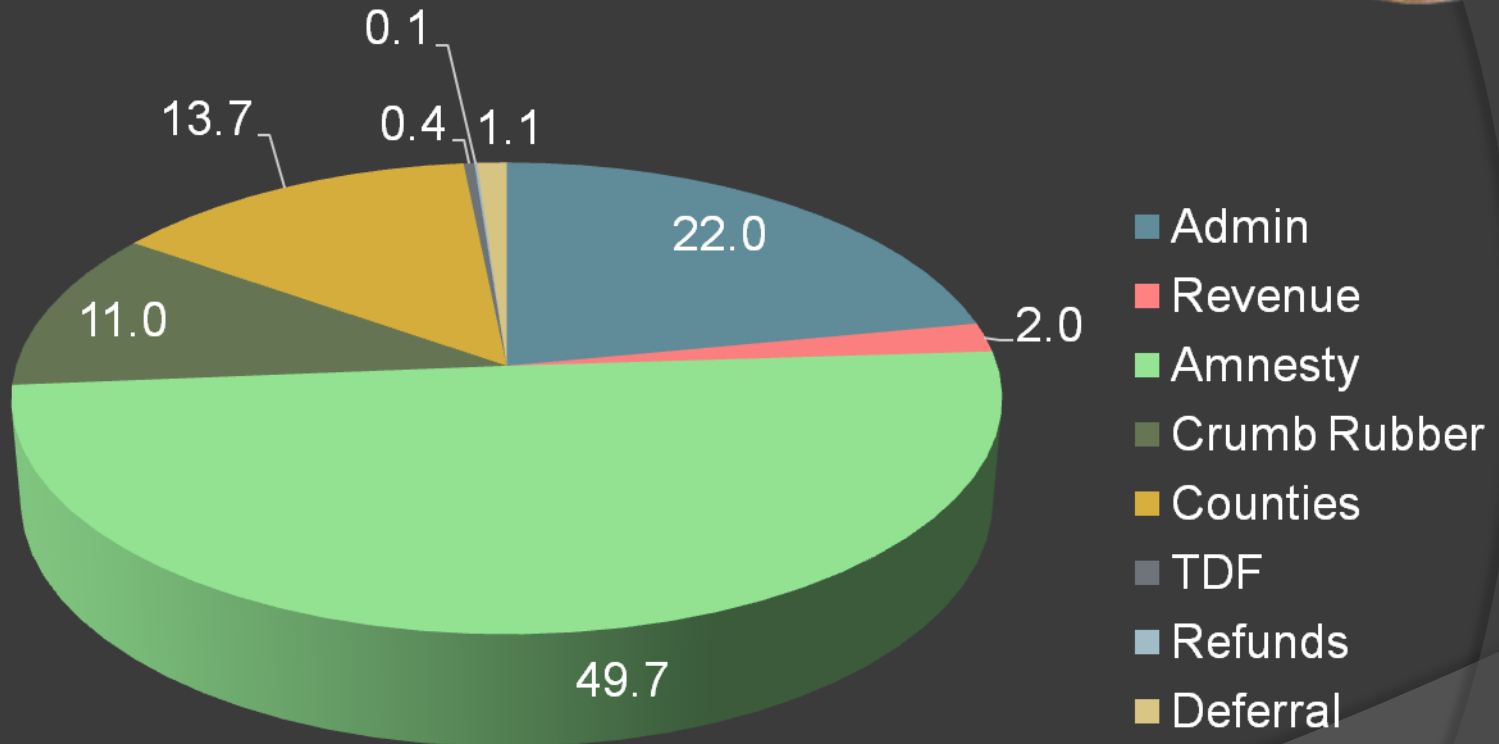
Expenditures in \$					
FY	2009	2010	2011	2012	Total
Admin.	1,076,913	917,224	584,934	537,604	3,116,675
Revenue	50,000	50,000	50,000	50,000	200,000
Amnesties	774,776	1,445,838	660,641	1,216,251	4,097,506
Rub. Grants	199,458	299,954	400,000	269,547	1,168,959
Counties			351,000	336,000	687,000
TDF	785	20,491		8,788	30,514
Davis	23,940				23,940
Refunds	1,189	1,919	4,340	3,255	10,703
Deferral				25,900	25,900
TOTAL	2,127,061	2,735,876	2,050,915	2,447,345	9,361,197

Expenditures in \$



Expenditures in %

FY 2012



Fee Effectiveness

Cost Issues



Costs:

- One processor has approximately 1.9 million PTEs accumulated
 - If fire occurs, cost to remediate could exceed \$3.0 M
- \$50,000 annual payment to Revenue
 - Change from cabinet administrative cost to expenditure



Effectiveness of the Waste Tire
program in Developing Markets
for Waste Tires

Markets



Markets

Generation



CY 2011 Generation

Number of KY Tires based on U.S. Generation				
	M Tires		M PTEs	
	U.S.	KY (1.5%)	U.S.	KY (1.5%)
Replacement	243.9	3.7*	336.1	5.0
Salvage	24.4	0.4	33.6	0.5
Total	268.3	4.1	369.7	5.6

* Subject to \$1 per tire fee less 5% internet sales, or \$3.5 M





Markets

CY 2012 Markets

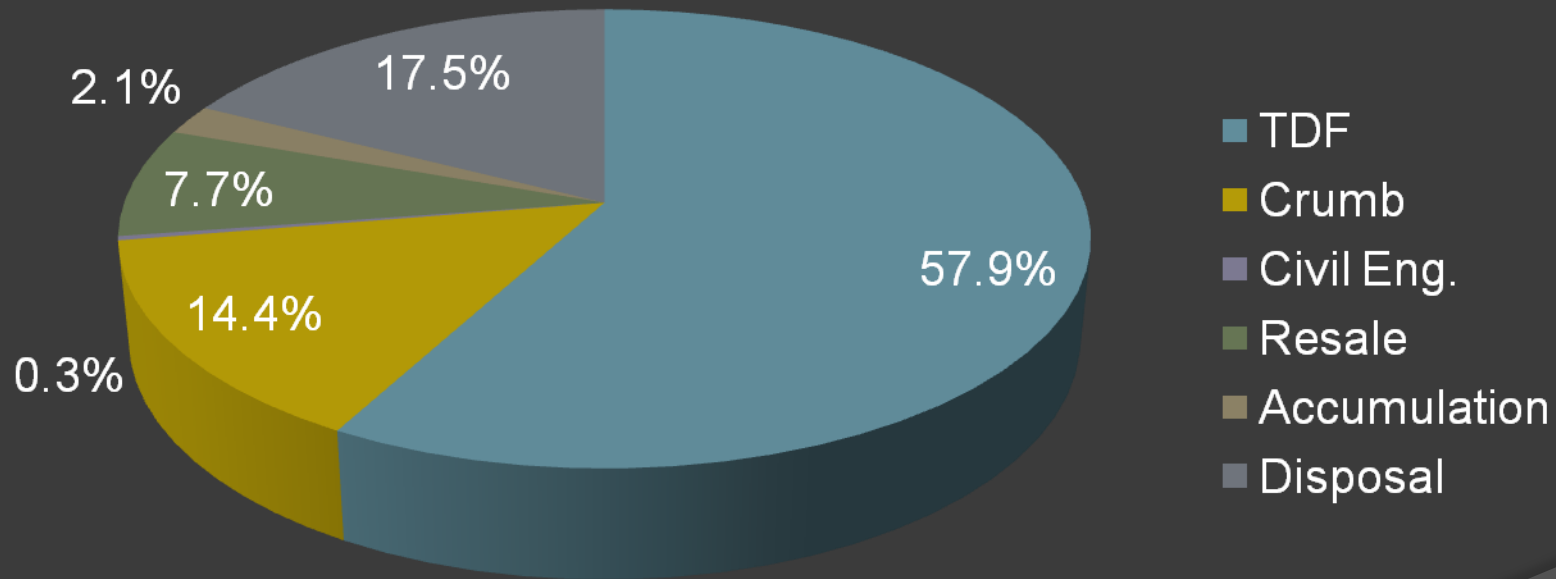
CY 2012 Markets



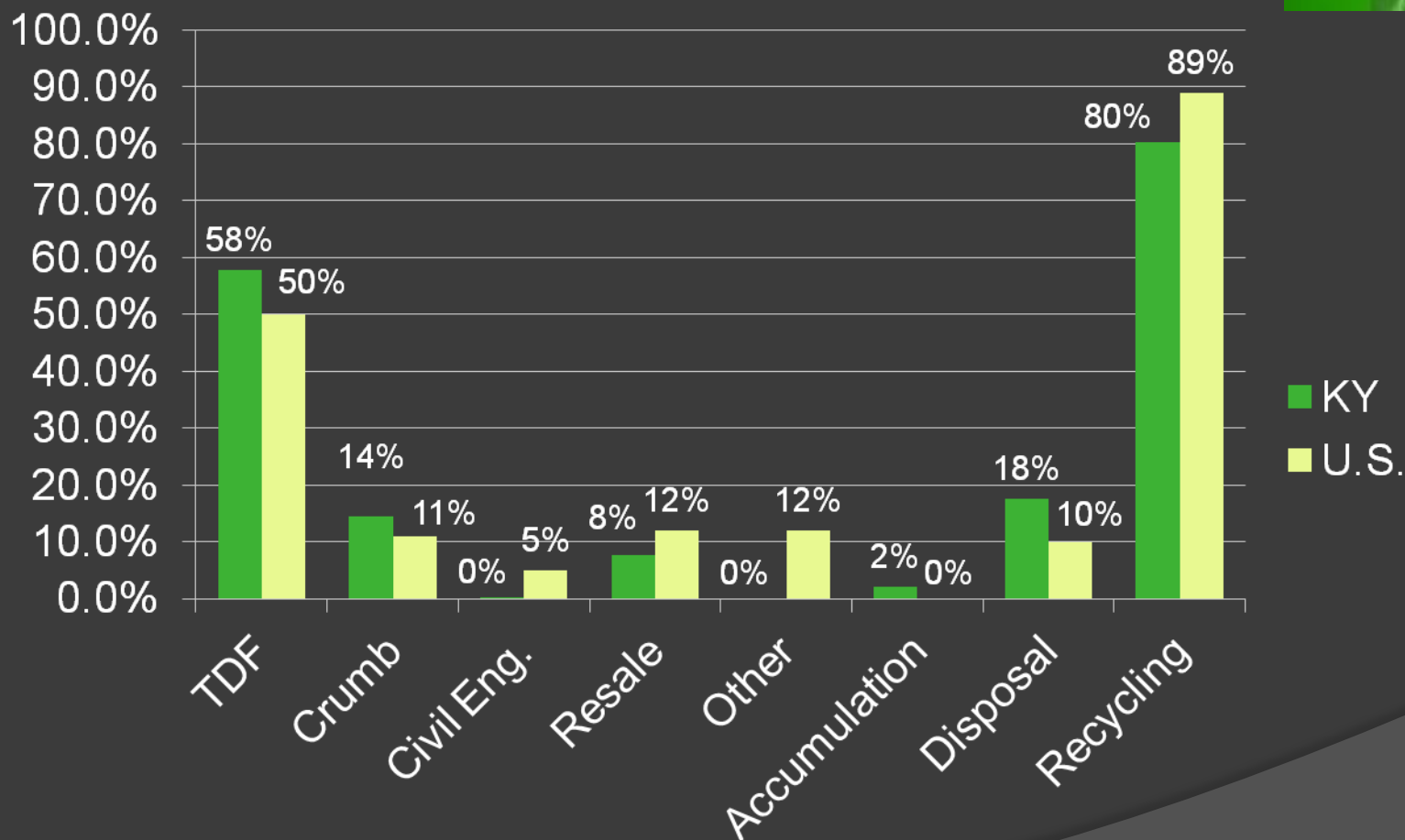
Kentucky Waste Tire Markets (Tons)								
	Recycled					Storage	Disposal	Total
	TDF	Crumb	Civil Eng.	Resale	Subtotal			
In-state	19,960	3,735	0	3,850	27,545	1,025	8,695	37,265
Out-of-state	0	0	171	0	171	0	0	171
Amnesties	8,850	3,450	0	0	12,300	0	0	12,300
TOTAL	28,810	7,185	171	3,850	40,016	1,025	8,695	49,736
Percent	57.9%	14.4%	0.3%	7.7%	80.5%	2.1%	17.5%	100.0%

CY 2012 Markets

2012



CY 2012 Markets



Note: U.S. Recycling dropped to 81.6% for 2011 "Softening scrap tire market prodding industry to adapt", *The Tire Business*, May 30, 2013

Markets

Tire Derived Fuel



TDF Market Development

In-State TDF Use (PTEs)		
Company	2011	2012
Kosmos/CEMEX	1,116,800	1,295,000
OMU	358,000	362,000
NewPage	218,200	410,000
TOTAL	1,693,500	2,067,000

8% increase from 2011 to 2012

72% In-state
28% Out-of-state

Kosmos: <http://www.courier-journal.com/apps/pbcs.dll/gallery?Avis=B2&Dato=20121126&Kategori=NEWS&Lopenr=311260048&Ref=PH>



- Cabinet submitted letter to PSC in support of East Kentucky Power Cooperative (EKPC) use for fuel adjustment clause for possible TDF use
- EKPC could use 1.4-2.8 M PTEs per year based on 2-4% TDF



● TDF Emissions:

- Saves 7,000 T CO₂ annually statewide
- Saves 37% NO_x annually at CEMEX/Kosmos



Markets

Ground Rubber



● Ground Rubber Market Development:

- Has increased from zero in 1998 to 768,500 PTEs in 2012
- Past to present:
 - EEC awarded 315 grants totaling \$6.8 M since FY 2004
 - Awarded 20 grants for \$300,854 in FY 2012



A map of Kentucky showing all 120 counties. Fifteen counties are highlighted in green: Boone, Campbell, Carroll, Trimble, Bullitt, Anderson, Woodford, Fayette, Jessamine, Washington, Mercer, Hart, Barren, Pulaski, Russell, Clay, and Letcher. The other 105 counties are shown in white with black outlines and labels.

● Future Ground Rubber Market Development:

- Future:

- Focus on automotive parts since state is third in U.S. automotive employment
- Rubberized asphalt
 - Use of hybrid (polymer + rubber) in open graded friction course reduces hydroplaning
 - Open-graded overlays find increased pavement strength, longevity and drivability

Michelin Boulevard
Anderson County, SC (EPA
WTWG 2010)



Should the fee be extended beyond June 30, 2014?

Extending the Fee?



● States that discontinued program:

- Reappearance of illegal tire dumps and fires
- Legislature faced with huge remediation costs

- Los Reales Landfill
Tire Fire Tucson AZ
1989 Rick Wiley



Cost of tire disposal by counties

County Disposal Costs



Cost of Tire Disposal

- Recycling: Approximately \$1.50-2.00 at retailer
- Disposal: \$1.00-1.50



County Costs (Con'td)

- \$3,000 Grants made available
- PRIDE fund used to pick up tires along roadways



Other Issues



Waste Tire Receipt

- Close the loop: Require a copy to be returned from processor to retailer

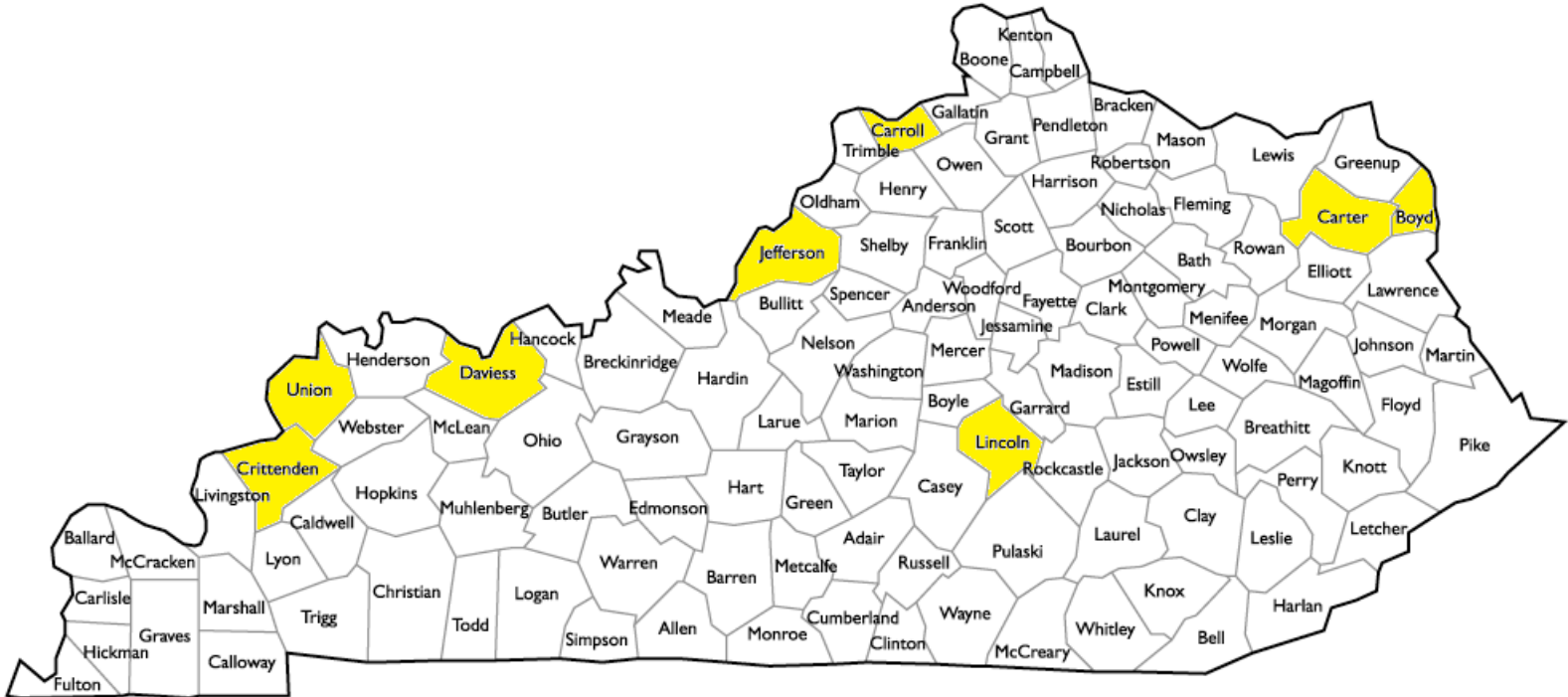


Private-Public Market



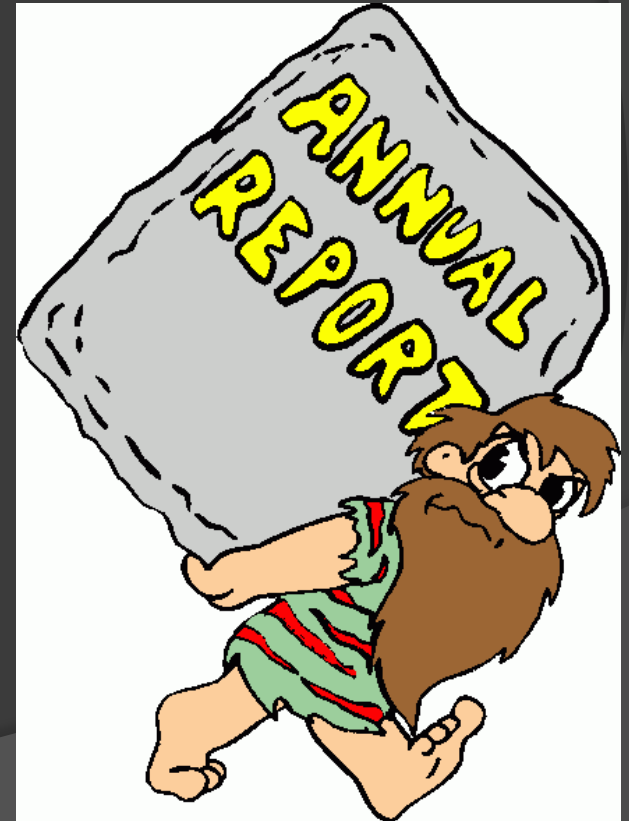
- Private market handles 73%
- Public (Amnesties) 27%
- If private markets decrease, state amnesties do not have enough funds to handle generation
- Processor location key to transportation costs

Kentucky Tire Processors



Report Frequency

- Law requires annual
- Every two years better
 - Matches budget cycle



Waste Tire Report

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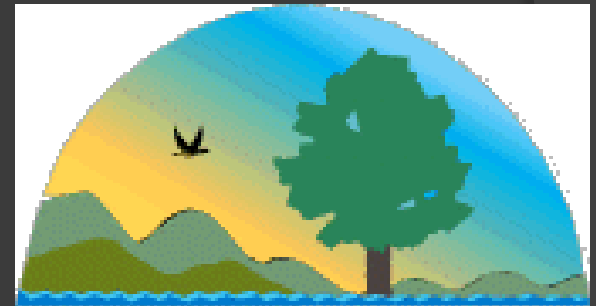
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Waste Tire Report

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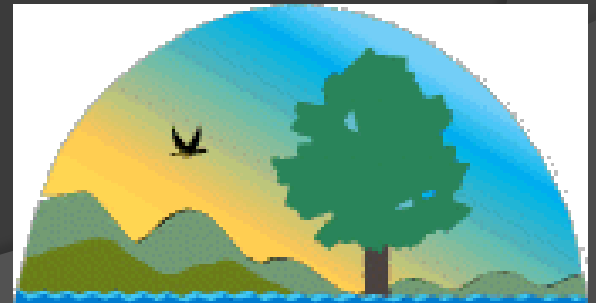
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Waste Tire Report

- Questions?
- For more info & references see “2012 Kentucky Waste Tire Program Report” at <http://waste.ky.gov/RLA/Waste%20Tires/Pages/default.aspx>

